WLTP DTP Additional Pollutants subgroup	
Title	AP Subgroup 3rd Meeting in Ispra — Minutes
Working Paper Number	WLTP-DTP-AP-04-20 Ispra Meeting Minutes

Date: Dec. 9/10 2010

Location: JRC/Ispra Document Nr.

GTR

Mr Thiel gave an overview of the GTR (ICE lab procedure group: Raw Version after Workshop 05./06.08.2010 in Brussels) and the necessary input from AP-group. A new version was created and placeholders have been added where text will have to be added. Format: ***DTP-AP:*** text…

Drafting of text was not possible within the meeting due to lack of time. Drafting of reference methods was tasked within group with due date next meeting (March 2011).

WLTP-DTP-AP-GTR-01 draft

Input from Equipment Manufacturers:

AVL	WLTP-DTP-AP 04-03
HORIBA	WLTP-DTP-AP 04-04
MAHA	WLTP-DTP-AP 04-05

Input from Laboratories

Comparison of GC ECD and NDIR for NO2	WLTP-DTP-AP-04-20
Japanese proposal on NO2	WLTP-DTP-AP-04-21
PSA data on NO2 measurement	WLTP-DTP-AP-04-22
Cavity ring down for N2O – first results	WLTP-DTP-AP-04-23

Performance criteria

Based on the Range of emission level to be measured performance criteria (LoD, LoQ, rise time and max. interference) have been derived. Table will be base for choice of candidate methods.

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Table of candidate methods

A table of candidate methods to be evaluated has been set up. Possible reference methods have been identified. Possible source of text has been added where possible.

Gathering of required information with respect to performance criteria has been tasked within group.

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Definitions

Definitions for THC, NMHC and NMOG have been agreed upon. Alignment with ICE lab group is needed.

THC:	total Hydrocarbons (All compounds measurable by FID)
NMHC:	Non-methane hydrocarbons (THC excluding CH4 and ROH, response factors (cutter efficiency?) are applied)
NMOG:	Non-methane organic gases (NMHC plus ROH and RHO)

Discussion

NO2: allow bag measurement

Due to low concentrations, difference between continuous and bag measurement become very small. Only about 2 % of NO will be converted. However, driving cycle, analysis time and bag concentrations are not yet known and error might become larger. Base of error calculation should be the NO2 concentration. Initial drafting will be based on OICA proposal (WLTP-DTP-02-06e). Difference between continuous and bag method will again be evaluated based on new cycle.

How will new methods be evaluated?

For the evaluation of the proposed methods it was agreed, that specific small tasks will be assigned to laboratories within the group. A thorough evaluation during WLTP phase 2 testing is not realistic due to high number of other issues to be addressed.

Allow Factors to calculate NMOG

It was agreed, that alternatively to the measurement of Ethanol and Aldehydes factors depending on fuel, test conditions (and on aftertreatment technology if needed) should be applicable to calculate the respective concentration from NMHC measured with FID (see approach of CARB). The determination of these factors will need a broad database based on new cycle. The measurement methods will have to be developed in any case.
The approach will be presented to DTP5 after further elaboration.

Open issue: how will the testing in WLTP phase 2 be performed?

Next face to face meetings:

7/8 March 2011 in Munich hosted by BMW

TBD in June in Ispra

Telephone conferences in between when necessary